



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
09/803,914	02/21/97	BROWN	P NRWB: 006

EXAMINER

26M2/0905

RICHARD C AUCHTERLONIE  
ARNOLD WHITE & DURKEE  
P O BOX 4433  
HOUSTON TX 77210

TWEEET
ART UNIT

2617

PAPER NUMBER
--------------

75

DATE MAILED: 09/05/97

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

### OFFICE ACTION SUMMARY

☒ Responsive to communication(s) filed on 2/21/97

☐ This action is FINAL.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

#### Disposition of Claims

☒ Claim(s) 9-19 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 9-19 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement.

#### Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. § 119

☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☒ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e).

#### Attachment(s)

☒ Notice of Reference Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 4

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--SEE OFFICE ACTION ON THE FOLLOWING PAGES--

Art Unit:

## DETAILED ACTION

### *Priority*

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in the United Kingdom on 22 Oct 1992. It is noted, however, that applicant has not filed a certified copy of the GB 9222205.8 application as required by 35 U.S.C. 119(b).

### *Drawings*

2. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 9-12 and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by **Whyte** [U.S. 3,942,170].

For claim 9, the communications apparatus taught by **Whyte** includes the following claimed subject matter, as noted, 1) the claimed electricity distribution network is read on both the

Art Unit:

Abstract and the specification (Col. 2, Ln. 19) that states that the invention uses existing powerline distribution carriers, 2) the claimed input and/or removal of telecommunication signals is achieved using the modems (Nos. 76 and 90) to send a telecommunication link through the existing power network, 3) the claimed main inductor is met by either winding (Nos. 20 and 22) of the power transformer arranged between a power input and a power output to the consumer's premises, and 4) the claimed coupling capacitor is met by one of the amplifying capacitors (No. 114) connected between the power input and the transmitter/receiver system (Nos. 111 and 113).

For claim 10, the claimed shunt inductor is met by either inductor connected from the unidirectional couplers (Nos. 66 and 70) and ground.

For claim 11, the claimed shunt capacitor is met by the capacitors connected between the stepdown transformers (Nos. 24 and 26) and ground.

For claim 12, the subject matter is merely a combination of the subject matter of the two previous rejected claims.

For claim 14, the communications apparatus taught by **Whyte** includes the following claimed subject matter, as noted, 1) the claimed electricity distribution network is read on both the Abstract and the specification (Col. 2, Ln. 19) that states that the invention uses existing powerline distribution carriers, 2) the claimed input and/or removal of telecommunication signals is achieved using the modems (Nos. 76 and 90) to send a telecommunication link through the existing power network, 3) the claimed first inductor is met by either winding (Nos. 20 and 22) of the power transformer arranged between a power input and a power output to the consumer's

Art Unit:

premises, 4) the claimed series combination of a coupling capacitor and a fuse is met by the capacitor and fuse connected between the distribution transformer (No. 26) and the aforementioned unidirectional coupler (No. 70) from the transmitter/receiver combination, and 5) the claimed second inductor is met by the inductor connected between the same coupler and ground, providing a current path when the capacitor suffers a fault condition.

For claim 15, the claimed shunt capacitor is met by the capacitor (No. 98) that is connected between the power output and ground.

For claim 16, the claimed series combination of a fuse and a shunt capacitor is met by the capacitor mentioned in the previous claim and the accompanying fuse connected between the power output and ground.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 13 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whyte.

Art Unit:

For claim 13, the communications apparatus taught by **Whyte** includes the claimed subject matter as discussed in the rejection of claims 9-12 above. However, while several shunt capacitors are included in the circuit configuration, none are connected at the intermediate point of an inductor comprising two generally parallel-spaced elongated ferrite rods wrapped with conductors.

Wrapping conducting material around elongated ferrite rods is but one of several commonly known methods of creating an inductance component. Many amateur electricians create inductors in such a fashion to conduct or construct electronic experiments. This information has been known for many generations as a tried and true method of constructing a reliable and useable inductor. Moreover, shunt capacitors are widely used to control excess voltage in case of a current overload in an electric circuit.

Since **Whyte** is but one example of a power network utilizing inductive components, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the main inductor by winding a conductor around ferrite rods for the purpose of taking advantage of a well known, common technique for constructing an inductive device.

For claim 17, the communications apparatus taught by **Whyte** includes the claimed subject matter as discussed in the rejection of claims 14-16 above. However, while several shunt capacitors are included in the circuit configuration, none are connected at the intermediate point of an inductor comprising two generally parallel-spaced elongated ferrite rods wrapped with conductors.

Art Unit:

Wrapping conducting material around elongated ferrite rods is but one of several commonly known methods of creating an inductance component. Many amateur electricians create inductors in such a fashion to conduct or construct electronic experiments. This information has been known for many generations as a tried and true method of constructing a reliable and useable inductor. Moreover, shunt capacitors are widely used to control excess voltage in case of a current overload in an electric circuit.

This claim is interpreted and rejected for the same rationale as is mentioned in the rejection of claim 13 above.

For claim 18, the communications apparatus taught by **Whyte** includes the following claimed subject matter, as noted, 1) the claimed electricity distribution network is read on both the Abstract and the specification (Col. 2, Ln. 19) that states that the invention uses existing powerline distribution carriers, 2) the claimed input and/or removal of telecommunication signals is achieved using the modems (Nos. 76 and 90) to send a telecommunication link through the existing power network, 3) the claimed first inductor is met by either winding (Nos. 20 and 22) of the power transformer arranged between a power input and a power output to the consumer's premises, 4) the claimed series combination of a coupling capacitor and a fuse is met by the capacitor and fuse connected between the distribution transformer (No. 26) and the aforementioned unidirectional coupler (No. 70) from the transmitter/receiver (Nos. 111 and 113) combination, 5) the claimed second inductor is met by the inductor connected between the same coupler and ground, providing a current path when the capacitor suffers a fault condition, and 6)

Art Unit:

the claimed series combination of a first fuse and a first capacitor is met by the capacitor (No. 98) and accompanying fuse connected between the power output and ground. However, while several shunt capacitors are included in the circuit configuration, none are connected at the intermediate point of an inductor comprising two generally parallel-spaced elongated ferrite rods wrapped with conductors.

Wrapping conducting material around elongated ferrite rods is but one of several commonly known methods of creating an inductance component. Many amateur electricians create inductors in such a fashion to conduct or construct electronic experiments. This information has been known for many generations as a tried and true method of constructing a reliable and useable inductor. Moreover, shunt capacitors are widely used to control excess voltage in case of a current overload in an electric circuit.

The claim is interpreted and rejected for the same rationale as mentioned in the rejection of claim 13 above.

For claim 19, the subject matter of the claim, that is, the two parallel-spaced elongated ferrite rods, are addressed in the rejection of the previous claim.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

**Whyte et al** [U.S. 4,142,178] includes a high voltage coupler to couple the communication signals at a frequency without interfering with the frequency of the power output.

Art Unit:

**Udren** [U.S. 4,475,209] provides detection, remodulation, and retransmission of digital data over bundle conductors of a power line.

**Reyes** [U.S. 4,772,870] teaches a low-level RF communications system designed to operate over a power line.

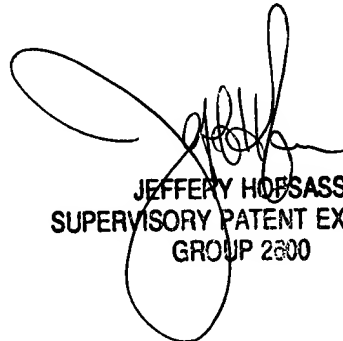
**Nilssen** [U.S. 5,068,890] is a combined telephone and electric power distribution system.

**Sutterlin et al** [U.S. 5,148,144] delivers power and communications over the same cable.

**Chaffanjon** [U.S. 5,497,142] delivers a directional coupler circuit for a medium-frequency carrier current on an electrical line.

8. Any inquiry concerning this communication should be directed to Examiner John Tweel at telephone number (703) 308 7826. The examiner can normally be reached on Monday-Thursday, 8:30a-5:00p. The examiner can also be reached on alternate Fridays.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Hofsass, can be reached on (703) 305 4717. The fax phone number for this group is (703) 305 3988.

  
JEFFERY HOF SASS  
SUPERVISORY PATENT EXAMINER  
GROUP 2800

John Tweel

August 26, 1997